

- A CULTURAL HERITAGE IMPACT ASSESSMENT -

PROPOSED RE-ZONING PROJECT AT GREAT NORTH AND YARRABANDINI ROADS, FREDERICKTON, KEMPSEY LOCAL GOVERNMENT AREA, NEW SOUTH WALES

A Report To:	Kempsey Shire Council
Date:	18 September 2017
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Document Verification

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EXECUTIVE SUMMARY

In August 2017 Kempsey Shire Council engaged Remnant Archaeology to carry out a cultural heritage (Aboriginal and non-Aboriginal) impact assessment as a component of their preliminary planning for a re-zoning and residential development proposal across a series of lots at Frederickton, north of Kempsey in northern New South Wales. With the assistance of a representative from both the Dunghutti Elders Council (Mr Bob Mumbler Snr) and the Kempsey Local Aboriginal Land Council (Mr Wayne Sines), the Remnant Archaeology field archaeologist (Graham Knuckey) completed a site inspection of the designated study area (See Fig. 2) on 8 August 2017.

Despite the study area being in a landscape that OEH would describe as indicating the presence (or potential presence) of Aboriginal objects, no Aboriginal objects or places were located during the site inspection. Further to this, as described here, if there has been objects and/or places of cultural heritage importance present in the past the level of current disturbance and landscape modification suggests the possibility of any sites still existing would be low to zero. What must also be considered, however, is the low to non-existent ground surface visibility (GSV) across the entire study area which preserves the possibility (however small) that there may still be some cultural heritage items present.

As a result of the visual inspection outcomes and the assessment contained in this report it is recommended that:

- Due to the fact GSV was non-existent across a large proportion of the study area and the fact that disturbance was reduced in some areas of the study area it is recommended the Aboriginal groups involved in the site inspection, the Kempsey Local Aboriginal Land Council and the Dunghutti Elders Council, be involved in monitoring initial ground disturbance activity (including vegetation removal and clear/grade earthworks to a depth of 1m) in the following areas:
 - Lot 001 DP 126564.
 - Lot 001 DP 857721 northern section along the drainage/creek line.
 - Lot 223 DP 752437.
 - Lot 227 DP 752437 eastern section.
 - Lot 228 DP 752437 eastern section.
 - As well as the public access route east-west along the northern margin of Lot 1 DP 126565

All groups need to be given a minimum 14 days notice prior to the commencement of these earthworks.

- It is recommended that Council staff and contractors involved in the initial ground disturbance activities be required to participate in a cultural heritage induction program, developed in collaboration with the local Aboriginal Community.
- In conjunction with induction training developed in collaboration with the local Aboriginal Community, it is recommended Council include a program of cultural awareness to provide an opportunity for explanation of the cultural significance of the Kempsey to Clybucca area, and strengthen the relationships Council is seeking.
- It is recommended that Kempsey Shire Council maintain consultation with the Aboriginal Stakeholders involved, and ongoing. consultation should be for the duration of the initial ground disturbance phase, if not for the entire project.
- It is recommended a Stop Work Procedure (SWP) be installed in recognition of the potential, albeit low, for discovery of unexpected or incidental finds. Note that any works that may reveal or disturb cultural heritage objects or sites will require an AHIP from OEH in order for the find(s) to be mitigated (if avoidance is not an option). The SWP procedure is outlined in the table below, adapted from Fox (2014a; 2014b; 2014c).

Should the work being undertaken include the use of large earth working equipment (large-scale excavators, for example), it may be possible in some instances to isolate the cultural object/place and continue working without further disturbance. Advice from a heritage consultant or Aboriginal field officers/monitors (if present) should be sought, but a nominal buffer of up to 10m may be required, with high-visibility barrier fencing/mesh surrounding the find location.



Council must ensure every on-site contractor/worker is provided with a copy of the SWP process and that all on-site workers are made aware if/when the SWP is brought into action. **IMPORTANT** - Depending upon the nature and importance of the find a full cultural heritage assessment may be necessary as part of an application for an Aboriginal Heritage Impact Permit (AHIP).

STOP WORK	Immediately, upon becoming aware of a potential cultural heritage object or archaeological resource		
CONTACT	A qualified cultural heritage professional as soon as possible		
	The Kempsey Shire Council's Heritage (or Senior Project) Officer, Dunghutti Elders Council and Kempsey LALC, (if their rep(s) are not already present), and advise OEH as soon as practicable.		
NOTIFY	If bones or potential human remains are discovered, Police must be notified immediately. Police must provide written notification to proceed. If human remains are identified as Aboriginal, OEH will provide written notification of required actions.		
	The cultural heritage professional in conjunction with OEH and the Aboriginal stakeholders should assess the significance of the resource and recommend a course of action e.g.:		
ASSESS	 Protect and avoid; or Investigate, in accordance with the Code of Practice for Archaeological Investigations; or Develop management strategies to inform an AHIP to regulate the unavoidable harm to Aboriginal objects 		
ACTION	Identification of a previously unrecorded cultural heritage object will require registration as an Aboriginal site on the OEH AHIMS database. Registration is required as soon as practicable		
APPLY	To OEH for an AHIP if necessary		
RECOMMENCE	Only when OEH has approved a course of action and/or provided conditions of approval for an AHIP		

In the event that skeletal remains are uncovered, work must cease immediately in the area surrounding the find and the area cordoned off. The NSW Police Department is to be contacted and no further action taken until written advice is received from the Police allowing work to recommence. If the remains are determined to be of Aboriginal origin, the Office of Environment and Heritage must be notified along with the Aboriginal Stakeholders to the project. A plan of management for the preservation of the remains must be put in place prior to works recommencing and it must be developed in consultation with the Kempsey LALC and the Dunghutti Elders Council.



ACKNOWLEDGEMENTS

The author acknowledges with gratitude the members of the Kempsey Aboriginal Community, Bob Mumbler Snr and Ngaire Matthews (Dunghutti Elders); Wayne Sines and Paul Morris (Kempsey LALC) for their assistance in logistical matters (Ngaire and Paul) and assistance in the field (Bob and Wayne). The author also acknowledges the assistance of Bruce Potts from Council for his cheerful and accommodating assistance with all requests and the provision of information for this assessment report.

TERMINOLOGY

Amorphous piece	A stone that displays attributes that identifies it as an artefact but it is not a flake or a core; also known by other names such as 'blocky' fragment and 'angular' fragment.
Artefact	Any item that has been created or modified by humans.
Artefact scatter	A concentration or 'scatter' of artefacts found on the ground surface indicating prehistoric human activity at that location. Also known as 'open' sites, surface scatter, general artefact scatter and when found in association with hearths can be called a 'campsite'.
Assemblage	Any collection of items from an archaeological site or deposit. The term can describe a group of similar items: the lithic assemblage or the faunal assemblage, for example. Or it can be used to describe all items, the archaeological assemblage from Test Pit 10, for example.
Axe blank	A lithic artefact, usually an igneous raw material (but not always) that has been 'shaped' using direct percussion, to a particular shape suitable for use as an axe. The edge has not yet been ground onto it. Also called 'bifaces'.
Backed artefact	Uni- or bi-directional retouch along one lateral margin of an artefact, often a flake but not always. Tends to occur on the opposite margin to the intended working edge.
Background scatter	Defined by Hiscock (1988) as a continuous scatter of stone artefacts the density of which varies in response to the nature and amount of prehistoric activity. Also called 'off-site archaeological material'.
Bi-facial flaking	When, during the knapping process, flakes are removed from both the dorsal and ventral surfaces of a flake. The resulting artefact is often called a 'biface', which can be a 'blank' that is in the process of being made into something else (an axe for example), or it can be a source of raw material - a core.
Bi-facial point	Any point that has been struck after initial removal, where the scars occur on both surfaces, ventral and dorsal (initiated from either lateral margin).
Blade	A flake that measures greater in the longitudinal plane than it does in the transverse plane, usually greater than twice the width. This term does not indicate function without further clarification. For example use wear along the margins.
Bulb of percussion	The 'lump' directly below the point of force application at the proximal end of the ventral surface of a flake. The bulb represents the point at which force applied through the PFA has removed the greatest mass. As the force passes through the flake it is reduced and so less mass is removed. The bulb is the primary diagnostic feature used when identifying flaked artefacts Conversely, the negative bulb appears on the surface of the core from which the flake was removed.
Chert	This is a cryptocrystalline sedimentary rock with high silica content that fractures conchoidally and is preferred as a raw material from which to make stone artefacts. Jasper and agate are forms of chert.
Context	This is a term used in association with ground integrity (GI) and ground surface visibility (GSV). When assessing an archaeological site the archaeologist takes into consideration the GSV, the GI, all landmarks within the site including vegetation types, lithic raw materials present and also the surrounding environment. All aspects of the on-site and off-site landscape are taken into consideration when assessing the context within which an archaeological site exists.
Cortex	The outer, weathered surface of a rock and is often the first thing to be removed in the initial stages of the knapping process.
Core	The core is one of the three basic items in the knapping process. It is the raw material resource that is struck with a hammer in order to produce a flake. The negative flake scars on their surfaces are what is used to identify cores.
Core: m-plat	A multiple platform core is a core that has been 'rotated' so that flakes have been removed in more than one direction from more than one platform.
Core: s-plat	A single platform core is a core that has not been 'rotated' so that flakes have been removed in only one direction, from only one platform.
Debitage	The broken and fragmentary material resulting from the knapping process. The 'waste' produced when removing flakes from a core, usually small but not always.
Direct percussion	The primary knapping technique where one stone is used to strike a flake off another stone using direct impact. See also 'pressure flaking' as another knapping technique.

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Distal	A term used when defining flake attributes. The distal end is the end of a flake that displays the termination. The distal end is the bottom end of a flake. See also 'proximal', 'lateral margin', 'ventral surface' and 'dorsal surface'.
Dorsal surface	This is the 'outside' surface of a flake: the surface that was exposed to the environment when the flake was still attached to the core. The dorsal surface often (but not always) displays the negative flake scars of flake removals taken from the core prior to the removal of the flake in question. See also 'ventral surface'.
Edge-ground axe	An axe the (sharp) edge of which has been created through the grinding process.
Excavation spits	Soil removed in layers of arbitrary depth from an archaeological excavation.
Excavation units	Soil removed in layers according to the soil profile and soil type, rather than in measured (arbitrary) spits.
Flake	The direct result of the knapping process a flake can be either the product used directly from the core or reduced further at some later time to create an implement, or, the flake can be a by-product, removed and discarded.
Flaked piece	A stone that displays attributes that identifies it as a flaked artefact but that cannot be identified with any more detail than as a 'flake fragment'. For example, an artefact that does not display clearly attributes such as a bulb, proximal end or distal termination, platform, dorsal or ventral surfaces, can be called a flaked piece.
Ground Integrity	The degree to which the ground surface has been disturbed by whatever means. Ground integrity is important in assessing the archaeological value of a place and/or items found within a place. It is closely associated with ground surface visibility (GSV).
Grinding grooves	The location in close proximity to permanent water and a source of soft and/or sandy rock, where linear ruts or grooves have been ground into the base rock whilst creating edge-ground axes.
Grindstone	A stone that has been subjected to grinding pressure by another stone to grind up various materials; grass seeds, ochre. Grindstones were also used for putting the edge onto axes or for sharpening spear tips. Large flat grindstones are called bottom-stones or base plates, whilst the smaller stone used to do the grinding is the 'muller' or topstone.
Ground-edge	Artefacts that have had an edge placed on them through the grinding process, rather than through knapping (percussion). This grinding process may be deliberate as with axes, or it might be a by-product of another process as with grindstones.
GSV	This means ground surface visibility: the degree to which the ground surface is visible.
Hammerstone	One of the two essential implements used in the knapping process to create flakes. See also 'core'.
Implement/tool	Any artefact that can be shown to have had a specific purpose. For example an axe, grindstone (base plate), muller (top stone) or tula (adze). All tools/implements are artefacts, <i>not</i> all artefacts are tools.
Isolated artefact	Also called an 'isolate'. Single artefact found in isolation - by itself.
Knapping	The mechanical process of striking one stone, the core with another stone, the hammer to produce another stone, the flake. These three stones are the foundation of the knapping process.
Knapping floor	A specialised type of artefact scatter where artefacts of the same raw material type are found in close proximity to one another, generally within 1m ² . These artefacts can often be put back together, reconstructing the original core they were struck from.
Lateral margin	There are two, the left and right lateral margins (sides). Which is which is determined by how the flake is viewed. Looking at the ventral surface with the platform at the top, the 'right' lateral margin is on the right; the 'left' lateral margin is on the left
Mudstone	A fine-grained sedimentary rock similar to chert but without the silica content of cherts.
Negative scars	The depression left on the core after a flake is removed; the place from which the flake has been fractured; the negative flake scar. These are most common on cores but are also identifiable on the dorsal surface of flakes. Flake scars on the ventral surface of flakes indicate retouch.
PFA	Point of force application is the point at which force enters the core, the impact point. Depending upon the angle and amount of force applied a flake removal is the desired result of this application of force.
Platform	The surface of a core that is struck by the 'hammer' to remove a flake.
Point	Any artefact that has the shape of a point. This term does not indicate function.
Pressure flaking	One of the two main knapping techniques. When a pointed object (that focuses pressure at one place) is placed against a core and pressure applied to the margin of the core in order to 'squeeze' flakes off. Commonly used to reduce the thickness of a flake rather than its size. See also 'direct percussion'.



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Proximal	A term used when defining flake attributes. The proximal end is the end of a flake that displays the platform and the PFA. See also 'distal', 'lateral margin', 'ventral surface' and 'dorsal surface'.
Retouched flake	Any artefact that has been struck after the initial impact that removed it from the core. This may be one strike; it may be more than one. The term does not indicate implement status, or function.
Ring crack	Another term for point of force application (PFA).
Silcrete	A descriptive term identifying a rock type of original, fine-, medium- or coarse-grained sedimentary material cemented together with silica in cryptocrystalline form. Grains are visible to the naked eye. Silcrete is a common source material in areas where sedimentary rocks have been subjected to low-grade contact with metamorphic processes.
Soil horizon	A soil horizon is a layer of soil most often parallel to the land surface, with properties that differ from the layers above and/or below it. In an archaeological deposit it is most often the A Horizon that contains the cultural deposit archaeologists are interested in - but not always.
Test Pit	Any location chosen for subsurface exploration using 50cm ² pits to test the archaeological potential at that place.
Test Pit Grid	A 2m ² grid subdivided into 50cm ² squares superimposed over the test pit location. Designed to maximise the area opened yet constrained to remain within the requirements of the OEH Code of Practice. Used where depth of deposit is, or is perceived to be a constraint.
Termination	The termination of a flake is the point at which the force applied exits the core. There are a number of different 'terminations' and each indicates different things including lithic raw material quality and also the skill or otherwise of the knapper.
Tree - carved	A tree that has been altered in recognisable patterns/designs, the actual meaning of which may be known or unknown. Carved trees are most often associated with particular or special places, or can be directional markers.
Tree - scarred	A tree that has been altered through the removal of bark and/or heartwood for (most commonly) utilitarian purposes. Scarring in this fashion is the result of bark removed for coolamons, shields and canoes.
Unifacial point	Any point that has been struck again, after initial removal, where the scars occur on one surface only, ventral or dorsal (initiated from either lateral margin).
Ventral surface	This is the 'inside' surface of a flake: the surface that is not exposed to the environment that is created at the time the flake detaches fro the core during the knapping process. Any flake scars on this surface indicate the flake in question has been retouched. See also 'dorsal surface'.
Waisted axe	An edge-ground axe that has a groove around it in the transverse plane, used for attaching a haft (handle). Also known as a 'hafted axe' even if the handle is no longer present. The groove is usually applied using direct percussion and the 'pecking' - force applied to an object that is placed upon the axe at the time of impact.



ABBREVIATIONS

ACHAR	Aboriginal cultural heritage assessment report
ACHA	Aboriginal cultural heritage assessment
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal heritage impact permit
ASL	Above sea level
AS	Aboriginal stakeholders
СН	Cultural heritage
СМ	(lowercase) Centimetres
DECCW	Dept. of Environment Climate Change and Water (now OEH)
DECAC	Dunghutti Elders Council Aboriginal Corporation
GI	Ground integrity
GPS	Global positioning system
GSV	Ground surface visibility
KLALC	Kempsey Local Aboriginal Land Council
КҮА	Thousand years ago
LALC	Local Aboriginal Land Council
LGA	Local government area
ММ	(lowercase) Millimetres
MYA	Million years ago
NPWS	(New South Wales) National Parks and Wildlife Service
NSWALC	New South Wales Aboriginal Land Council
NNTT	National Native Title Tribunal
NTS	Native Title Services Corporation
NT	Native Title
OEH	NSW Office of Environment and Heritage (previously DECCW)
RAP(s)	Registered Aboriginal Party (ies)
RA	Remnant Archaeology
TC(s)	Traditional Custodian(s)
TO(s)	Traditional Owner(s)



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1 INTRODUCTION

1.1 The Project Description

Kempsey Shire Council (Council or KSC) is preparing a residential development proposal covering various lots northwest of Frederickton, north of Kempsey (Fig. 1). The assessment area (study area, subject area or targeted land) covers approximately 30 hectares from Yarrabandini Road as the eastern boundary, falling away to the northwest (Fig. 2). The Great North Road makes up the southern boundary.

In general the targeted land is moderately undulating hill country, predominantly cleared of trees with small patches of remnant riparian vegetation along two intermittent creeks. These drainages dissect the study area and are part of an extensive low-lying swampland that marks the point at which the Macleay River Valley broadens out into a flood plain extending to Clybucca Creek in the north (Fig. 1). The assessment area is currently zoned as Primary Production (RU1), Rural Landscape (RU2) and Village (RU5) the lots to be impacted by the proposed development are listed in Table 1, along with the current land management status of each.



Figure 1 – The location of Frederickton in relation to Kempsey and the Macleay River. Image source: New South Wales Spatial Information Exchange (SIX Maps) website (https://six.nsw.gov.au).

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Figure 2 – The location of the study area. Image source: New South Wales Spatial Information Exchange (SIX Maps) website (https://six.nsw.gov.au).



Table 1 – Lots to be impacted either entirely or in part, by the proposed residential development.

Lot	Deposited Plan	Current status	Comments	Lot	Deposited Plan	Current status	Comments
1	126564	LCR	Entire lot	1	748840	PR	Entire lot
1	126565	PF	Entire lot	2	748840	PR	Entire lot
1	231681	PR	Entire lot	3	748840	PR	Entire lot
2	231681	LC	Entire lot	4	748840	LCC	Entire lot
4	418001	PR	Entire lot	223	752437	RR	Entire lot
2	545586	PR	Entire lot	227	752437	LC	Portion of lot
3	545586	PR	Entire lot	228	752437	LC	Portion of lot
4	657556	LC	Entire lot	1	857721	LC	Entire lot
1	657659	LC	Entire lot				

LC=land cleared. LCC=land cleared and cultivated. LCR=land cleared and regrown. PF=playing field. PR=private residence. RR=remnant and regrowth

1.2 The Cultural Heritage Brief and Scope of Works

1.2.1 The Cultural Heritage Brief

Kempsey Shire Council requires a cultural heritage impact assessment (CHIA) of the study area (See Fig. 2) that includes both Aboriginal and non-Aboriginal cultural heritage items and/or places. The assessment of Aboriginal cultural heritage will be carried out in accordance with Section 8 of the Office of Environment and Heritage (OEH) guidelines; *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW 2010 (DECCW 2010)*. REMNANT Archaeology (REMNANT or RA) has carried out this impact assessment using as a guide the specifications set out in the above document, but also with reference to OEH's *Draft Guidelines For Aboriginal Impact Assessment*.(NPWS nd). Concerning the assessment of non-Aboriginal (historical) heritage RA has used as a guide the specifications set out in the *NSW Heritage Manual* (NSWHO 2001). To satisfy the requirements of these documents the scope of this assessment includes:

- Searches of relevant heritage databases to identify/verify the presence and location of any registered Aboriginal and non-Aboriginal sites within the study area or within close proximity, databases including (but not restricted to);
 - The OEH Aboriginal Heritage Information Management System (AHIMS) database.
 - Kempsey Shire Council Local Environmental Plan (KLEP 2013).
- Consideration of the landscape context and land use history.
- o Assessment of the significance of any identified Aboriginal and/or non-Aboriginal items and/or places.
- Management recommendations to avoid/mitigate against any potential harm that may impact Aboriginal and/or non-Aboriginal items and/or places.

Consultation with the local Aboriginal Community during this preliminary phase of the proposed project has followed along the lines set out in the OEH document *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.



1.2.2 The Scope of Works

Aboriginal Heritage - The scope of works for this CHIA will include a description of Aboriginal objects and declared Aboriginal places located on, or associated with the study area (Fig. 2), including a description of cultural/natural heritage and archaeological (scientific) value and an assessment of significance, both scientific and cultural. Both tangible (archaeological) and intangible (with the help of the Aboriginal Community) heritage will be considered and the assessment will include natural areas of importance to Aboriginal people, their views (where provided) regarding the project, and the potential impact of it (the project) upon their cultural heritage. Submissions from the Aboriginal participants (if received) will be included in the report.

Where Aboriginal objects/places are found avoidance will be the first option recommended, however, where avoidance is not possible, the CHIA will include a description of the actual or likely harm to Aboriginal objects/places posed by the proposed development and will include a discussion of measures that may be taken to protect those Aboriginal objects or sites.

Non-Aboriginal Heritage - The scope of works for this CHIA will include an assessment of the impacts the proposed residential development may have upon any sites of [national, state or local government] historical significance, either listed on the various registers associated with each tier of government or sites not as yet unrecorded located within the assessment area (Fig. 2). This will include field survey to determine the presence/absence of unrecorded historical heritage and will include a significance assessment of anything of non-Aboriginal heritage significance (such as buildings, works, relics, gardens, landscapes, views, trees or places), and of the potential impact of the development upon these features.

1.3 The Objectives Of This Assessment

This assessment focuses upon the study area as shown in Figure 2 and the project objectives, as set out by Council are listed below:

- Consultation with the Aboriginal Community to identify their knowledge, interests and concerns involving the subject lands.
- Undertake a field survey of the subject land with representatives of the Kempsey Local Aboriginal Land Council.
- Incorporate any cultural views, concerns and recommendations provided by Aboriginal people as part of the consultation undertaken for this study.
- Undertake background research into the location, context and nature of previously recorded Aboriginal and European sites within the subject land and areas immediately surrounding the subject land through Register and Inventory searches.
- Identify the types of sites which may occur within the subject land and to assess the potential for such evidence to occur within the subject land relative to any future proposed impacts or uses.
- To undertake a comprehensive field survey for Aboriginal and European heritage sites or relics on the subject land in conjunction with local Aboriginal community representatives.
- To identify and record any Aboriginal or European sites that may be present within the subject land; assess their significance and identify management or conservation requirements.
- Provide assessment on the likelihood of undetected or buried sites to occur within the subject area.
- To prepare a report detailing the results of the field survey and assessment of heritage sensitivity in accordance with archaeological practice approved by the NSW Heritage Office.
- To formulate a specific set of management options and recommendations to direct future management of the subject land with respect to heritage.

With respect to the registered Aboriginal parties (RAPs), the assessment objectives are:

- To ensure that any input from the Aboriginal Community is recorded and that any issues or requirements of cultural groups are discussed and balanced to ensure appropriate results are obtained.
- To consult with the RAPs and based upon those discussions determine if and where cultural monitoring will be required, and to develop supporting information for any AHIP application that may be required.
- 4



2 THE LEGISLATIVE CONTEXT

2.1 The NSW National Parks and Wildlife Act 1974

The *NSW National Parks and Wildlife Act 1974* (the '*NPW Act*') provides protection for all Aboriginal cultural heritage (ACH) sites and objects in New South Wales and promotes the conservation of Aboriginal cultural heritage objects and places that are of high cultural significance. Sections 84, 86, and 87 of the Act provide protection for Aboriginal places (S84), describe that it is an offence to harm or desecrate and Aboriginal object or declared Aboriginal place (S86) and set out defences and exemptions available for activities that have the potential to result in harm and/or desecration (S87) to Aboriginal cultural heritage objects and/or places. Section 86 also sets out the penalties and regulations as defined in the National Parks and Wildlife Regulations, Part 8A.

The *NPW Act 1974* (the '*NPW Act*') is the primary piece of legislation for the protection of Aboriginal cultural heritage in New South Wales. The Office of Environment and Heritage (OEH) administer the *NPW Act* and it provides statutory protection for Aboriginal objects by making it illegal to harm them (Aboriginal objects) and Aboriginal places, and by providing two tiers of offence against which individuals or corporations who harm Aboriginal objects or Aboriginal places can be prosecuted. The *NPW Act* defines Aboriginal objects and Aboriginal places thus:

Aboriginal object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Aboriginal place means any place declared to be an Aboriginal place under section 84.

If Aboriginal cultural heritage objects and/or places are present or are likely to be present and the proposed activity will harm those objects and/or places then Sections 90-90R of the *NPW Act* outline the permit process that must be followed prior to the commencement of that activity. These sections provide details of the Aboriginal Heritage Impact Permit (AHIP) system as regulated by the Director-General of the Office of Environment and Heritage (OEH) and describe the Aboriginal Heritage Information Management System (AHIMS), the database of registered Aboriginal site information across New South Wales.

In 2010 the Department of Environment, Climate Change and Water (DECCW, precursor to the OEH) introduced a range of guidelines regarding the assessment and management of Aboriginal cultural heritage in New South Wales including the;

- o Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010a).
- o Code of Practice for the Archaeological Investigation of Archaeological Objects (2010b).
- o Due Diligence Code Of Practice for the Protection of Aboriginal Objects (2010c).
- o Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage (2011).

The highest tier offences under the *NPW Act* are reserved for knowledgeable harm of Aboriginal objects or knowledgeable desecration of Aboriginal places. Second tier offences are strict liability offences—that is, offences regardless of whether or not the offender knows they are harming an Aboriginal object or desecrating an Aboriginal place—against which defences may be established under the *NSW National Parks and Wildlife Regulation 2009*.

Section 87 of the *NPW Act* establishes defences against prosecution under s.86 (1), (2) or (4). The defences are as follows:

- An Aboriginal Heritage Impact Permit (AHIP) authorising the harm (s.87 [1]).
- Exercising due diligence to establish Aboriginal objects will not be harmed (s.87 [2]) due diligence may be achieved by compliance with requirements set out in the NSW National Parks and Wildlife Regulation 2009 or a code of practice adopted or prescribed by the NPW Regulation (s.87 [3]).



2.2 The NSW National Parks and Wildlife Regulation 2009

The NPW Regulation 2009 (cl.80A) assigns the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010c) as one of the codes of practice that can be complied with pursuant to s.87 of the NPW Act.

Of importance to this Aboriginal heritage impact assessment is the Regulation's description of 'disturbed land', defined by cl.80B (4) of the Regulation as:

"...disturbed if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable".

Examples given in the notes to cl.80B (4) include:

"construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, storm water drainage and other similar infrastructure)."

2.3 The NSW Environmental Planning and Assessment Act 1979

The Environment Planning and Assessment Act (EP&A Act) is the act that regulates land use planning and development in New South Wales and through it consideration must be given to the environment as part of the land use planning process. The EP&A Act accommodates documents such as the review of environmental factors (REF), statement of environmental effects (SEE), the environmental impact statement (EIS), and the environmental impact assessment (EIA). These documents are used as part of land use planning to assess the environmental impact of a development and in this context the environment includes both Aboriginal and non-Aboriginal (historic) heritage items and places. These assessments also take into consideration natural resource use and intangible aspects such as spiritual landmarks and landscape features linked to traditional stories.

The EP&A Act also accommodates state environment planning policy (SEPPs) that cover areas of state or regional environmental planning significance and local environmental plans (LEPs) which cover areas of local government environmental planning significance. Local environment plans commonly identify and have provisions for the protection of items and places that are of local heritage significance.

2.4 The NSW Heritage Act 1977

The Heritage Act 1977 protects the State's natural and cultural heritage. Aboriginal heritage is primarily protected under the *NPW Act* but may be subject to the provisions of the *Heritage Act* if the item is listed on the State Heritage Register or subject to an Interim Heritage Order (IHO). The *Heritage Act* established the NSW Heritage Council, which provides advice and recommendations to the Minister for Planning. The Minister approves the listing of items and places on the State Heritage Register and can also prevent the destruction, demolition or alteration of items of potential heritage value through an IHO until the significance of the item has been assessed. The Heritage Council is one of the State government agencies included in the IDA process in relation to its responsibilities for heritage items under Section 58 of the *Heritage Act*.

2.4.1 The New South Wales Heritage Register

The NSW Heritage Register (NSWHR) came into being in 1999 and lists over 20,000 items of historical, cultural (Aboriginal and non-Aboriginal) and architectural significance to the state and items include buildings, monuments, Aboriginal places, gardens, bridges, landscapes, archaeological sites, shipwrecks, bridges, streets, industrial structures and conservation precincts in either public or private ownership. The NSW Heritage Council maintains the NSWHR, makes decisions about the care and protection of places and items on it, provides advice on heritage matters to the Minister responsible for heritage in NSW, and makes recommendations as to places and objects for listing on the NSWHR.



2.5 The Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales

The Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales 2010 describes the process that must be followed and the actions that must be taken by a proponent, and the site conditions that must be satisfied, to show due diligence in the consideration of potential harm to Aboriginal objects. The Due Diligence Code sets out a framework with the following steps followed in order to make an assessment of whether or not proposed activities may impact Aboriginal objects:

- 1. Will the activity disturb the ground surface?
- 2. Search the AHIMS database and any other sources of which you are already aware.
- 3. Activities in areas where landscape features indicate the presence of Aboriginal objects.
- 4. Can the harm or the activity be avoided?
- 5. Desktop assessment and visual inspection.
- 6. Further investigations and impact assessment.

The process set out in the Code involves consideration of harm to Aboriginal objects at increasing levels of detail, with additional information incorporated at each step and used to support the decisions being made. If the proposed activities are not "low impact activities" (a defence that is provided under the Regulation) the considerations result in a determination of whether or not:

- o Further approval (an AHIP) under the NPW Act is required.
- Due diligence obligations for protecting Aboriginal objects are discharged by this process under the Code.

2.6 Local Government Environment Plans

Consideration of and protection for Aboriginal and non-Aboriginal heritage is provided under Part 5, Clause 5.10 of the *Kempsey Local Environmental Plan 2013*, where it states that consent is required for any impacts upon heritage items (as listed in Schedule 5), Aboriginal objects, Aboriginal place of heritage significance, a building, work, relic or tree within a heritage conservation area. Sub-clause 5 of Clause 5.10 in the LEP states that a heritage management document (aimed at assessing potential impact) may be required before development can be approved on land within which a heritage item is located, on land that is within a heritage conservation area, or on land that is within the vicinity of either of the previous two scenarios.

2.7 The Commonwealth Environmental Protection and Biodiversity Conservation Act 1999

Further to the state and local government heritage legislation, federal legislation may be applicable in some cases. The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) has provisions to protect items and/or places of national environmental/heritage significance and items listed on the various lists generated by the EPBC Act are places of national significance. These lists include the Register of the National Estate (RNE), National Heritage List (NHL), and the Commonwealth Heritage List (CHL).

2.7.1 The Register of the National Estate (RNE)

The Register Of The National Estate includes heritage places of natural, Indigenous and historical significance from around Australia. The RNE lists over 13,000 items/places but has been frozen since 2007, which means no new places have been added since that time. Places cannot, however, be removed. The list has no statutory power and has since been replaced by the National and Commonwealth heritage lists. Listing of an item on the RNE places no particular obligations on the owner prior to development and the Federal Minister is no longer obliged to give consideration to items on the list. The RNE is still accessible and is an important source of information.

2.7.2 The National Heritage List (NHL)

The National Heritage List is maintained by the Commonwealth Department of the Environment and was established for much the same reasons as the RNE, that is, to acknowledge natural, Indigenous and historic places of national significance. This list is current and has replaced the RNE as the primary list for items/places that have outstanding national heritage value. Anyone can nominate a place for inclusion on the NHL using a list



of criteria and guidelines specifically designed for the purpose. The Australian Heritage Council (AHC) makes recommendations about proposed listings, with the final decision made by the Federal Minister.

2.7.3 The Commonwealth Heritage List (CHL)

The Commonwealth Heritage List also recognises places with Indigenous, historic or natural heritage values, however this list registers only places that are owned or controlled by the Australian Government. Most often these include places of historical importance connected to defence, communication and other federal government activities. The CHL was established via amendments to the *EPBC Act* which means Commonwealth agencies are obliged to develop management plans for heritage items on their lands, and that prior to any impact on such items, advice must be sought from the Federal Minister.

2.8 The Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 can be called upon to provide protection for Indigenous cultural property in a broad sense. It is rarely relevant in the management of cultural heritage items, but does provide the ability to protect places, objects and folklore that 'are of particular significance to Aboriginal people in accordance with Aboriginal tradition'.

3 COMMUNITY CONSULTATION

3.1 Native Title

Since 1994 there have been seven applications for Native Title lodged by various Aboriginal stakeholders over various portions of the Kempsey Shire Council local government area (LGA). None of these related to lands including Frederickton and six have been either discontinued, dismissed or struck out. One progressed through to determination; claim number lodged by the Dunghutti People in October 1994 and determined in April 1997 (Table 2). The claim area lies within the Crescent Heads township.

Table 2 – Dunghutti People Native Title determination.

Stakeholder Name	NNTT File Number ¹	NNTT File Number ²	Date Filed	Date Determined
Dunghutti People	NC1994/005	NCD1997/001	10-10-1994	07/04/1997

1. National Native Title Tribunal application number. 2. National Native Title Tribunal determination number.

3.2 Aboriginal Community Notification

Two local Aboriginal organisations were consulted regarding the proposed residential development at Frederickton and were invited to comment regarding the presence/absence of tangible or intangible heritage places and/or tangible objects, that may be in the vicinity. The Kempsey Local Aboriginal Land Council and the Dunghutti Elders Council Aboriginal Corporation See Table 3. Letters were sent to each stakeholder informing them of the location of Council's proposed development area. This letter is reproduced here in Appendix A. Responses to the notification were received from both stakeholders, and both requested involvement in the field inspection, which was in turn carried out on 08 August 2017.

Table 3 - The Aboriginal stakeholders who responded to the notification letter.

Stakeholder	Contact Person	Field Officer Attending Site Inspections
Dunghutti Elders Council Aboriginal Corporation	Ngaire Matthews	Bob Mumbler (Snr)-
Kempsey Local Aboriginal Land Council	Paul Morris	Wayne Sines



3.3 Contributors to this Assessment

The field survey of the study area illustrated in Figure 2 and including the lots listed in Table 1 was completed on 08 August 2017 by Graham Knuckey (Remnant Archaeology). The archaeologist consulted with the local Aboriginal Community via the local Aboriginal Land Council and the Dunghutti elders Council (being the only organisation with a Native Title determination in the district). Both organisations expressed a desire to participate in the field survey and representatives from each were present on 08 August (Table 3).

4 THE ENVIRONMENT

4.1 Topography And Landforms

The Frederickton district lies across two landforms; low hills to the west that make up the foothills of the coastal ranges further west that in turn become the plateaus of the Northern Tablelands, and low-lying swamps and floodprone areas associated with the Macleay River and its tributaries across the floor of the Macleay River valley to the south, east and north. The Frederickton Golf Course lies at the pinnacle of a low range of gentle hills bearing north-south with views to the coastal lowlands eastward and to the Northern Tablelands to the west. The study area lies to the west of the golf club on the opposite side of Yarrabandini Road, on a gentle slope falling away toward Collombatti Creek further to the northwest.

To the north where the Macleay River valley broadens into a wide flood plain around Clybucca Creek (Fig. 1) can be found remnants of the Pleistocene coast, the coast as it was at approximately 10,000 years ago (Hails 1968; Knuckey 1999). From approximately 7000 years ago sea levels became more stable and this allowed sand dunes to develop between Korogoro Point and Smoky Cape. Through time this meant the coastline began to move east and as the Macleay River deposited sediment in behind the dunes across the lower Macleay River Valley an estuarine environment began to develop between where Frederickton lies and the current coastline. This environmental change can be seen in the archaeological evidence excavated by Connah in the mid-1970s where Aboriginal occupation of the Clybucca region and the shell middens they left behind have recorded a change in resources exploited from marine to estuarine species, including an increase in terrestrial fauna (Knuckey 1999).

When non-Aboriginal people appeared in the area in the mid-1800s there was thick rainforest along the western edge of the coast (McBryde 1982), across the land created by the movement of the sea eastward and the depositing of sediment by the Macleay River in behind the barrier dunes. Other landform features described included a lake to the south of the Macleay River mouth (Henderson 1851) and a large bay that became known as Clybucca Swamp as it began to silt up after European settlement (Pierce 1971). To mitigate against flooding the swamp was drained in the mid-1900s but there are still pockets of the original littoral rainforest (rainforest that grows on beach sand), coastal wetlands and estuarine ecosystems existing in the area (NPWS 2007). The estuarine wetlands still occur to the east of Frederickton.

4.2 Geology

The Frederickton district in the lower Macleay River Valley lies within the southern extremities of the Clarence-Moreton Basin, a bioregion that stretches across southeast Queensland north west of Brisbane to northern New South Wales in the vicinity of Grafton, covering an area of approximately 38,000 square kilometres (Rassam *et al.* 2014). The geology of the lower Macleay River Valley is predominantly alluvial sediments (Fig. 3) deposited in a pattern replicated across the low-lying flood plains of all the major northern rivers including the Clarence, the Richmond, and the Macleay, and which have in turn overlain earlier sandstone formations. These earlier sandstones were laid down during the Late Carboniferous – Early Permian Period (approx. 300-200 mya) and include mudstones and conglomerates. The formation is known as the Kempsey Bed Sandstones. The great majority of the coastal plains along the northern New South Wales north coast are composed of the unconsolidated alluvial sediments (75%), with sedimentary rocks the next most common substrate (13%), followed by meta-sediments (6%) and basic volcanics at 2% (Rassam *et al.* 2014). The volcanis, however, do not occur in the Frederickton area.





Figure 3 – Frederickton geology – dominated by alluvial deposits (yellow) overlying earlier sandstone formations of the Kempsey Beds (blue). The area of interest lies at the join between two geological maps, hence the slight mismatch of colour. Image source: Geosciences Australia (http://portal.geoscience.gov.au/). Each black square is 10km across, north is up.

4.3 Vegetation

Extensive clearing of the original vegetation has occurred along the Macleay River flood plain between Kempsey and Frederickton. The environment surrounding Frederickton was originally a dense forest and Neil (1972: 13) quotes Hodgkinson, contract surveyor to the Surveyor-General in 1840, as describing the vegetation along the Macleay River from Kempsey to the coast as, "...gigantic trees matted and interwoven together...by wild vines and creepers, and often presenting the appearance of an enormous wall covered from top to bottom with ivy...". To some degree, in some areas the forest has been able to revegetate, most often along the creeks where small pockets of remnant swamp species including various paperbarks (*Melaleuca* spp.) have been left to regenerate. Across the study area in general and in particular away from the drainages, little of the original vegetation survives.

The study area lies on land that has been extensively cleared of native vegetation although along the creek line that bears northwest toward Collombatti Creek, remnants of the original swamp land species still appear. River margins were home to Swamp Oak (*Casuarina glauca*), Broad-leaved Paperbark (*Melaleuca quinquenervia*) and Flooded Gum (*Eucalyptus grandis*) communities. Remnant Swamp Oak and Paperbark species still occur sporadically in the riparian zones along the creeks (Fig. 4). Regrowth of native vegetation has occurred in some areas, mainly in association with the low-lying riparian zones along the minor drainages and creek lines. Where vegetation exists within the study area currently, introduced tree and weed species dominate with the regrowth of some pioneering natives (some wattles, *Acacia spp.* for example) also apparent. In general the vegetation growth on-site is dominated by introduced and self-seeded pine species such as Radiata Pine (*Pinus radiata*) found across Lot 1 DP 126564, and a Macadamia (*Macadamia integrifolia*) orchard is present toward the south east corner of the study area, in behind the water tower on Lot 4 DP748840 (Fig. 5).





Figure 4 – Remnant paperbarks occurring along the track that passes through the study area from east to West on the northern boundary of the playing fields in Lot 1 DP126565.



Figure 5 – The Macadamia orchard on Lot 1 DP 748840.



5 THE HUMAN LANDSCAPE

5.1 Traditional Aboriginal Land Use

When considering traditional Aboriginal occupation along the Clarence River to the north Collins (2009) was led to reflect upon archaeological investigations carried out by Lilley in Queensland, where he (Lilley) identified (in the archaeological record) two 'land-using populations' of people occupying the southeast of that state prior to the arrival of non-Aboriginal people – that is, a coastal group and a sub-coastal hinterland group (Lilley 1984). Lilley made the point these two groups may well have been the same group just occupying different areas at different times of the year; the coast during the winter and the hinterland during the summer and what this meant was that Lilley was able to identify seasonality of land use. Seasonality has been interpreted in the archaeological record of the north coast of New South Wales as well, by McBryde (1974; 1982) and by Coleman (1978; 1980; 1982). Still in the Clarence River valley, Collins elaborates on this theme and suggests MacFarlane's descriptions from the 1930s of bark shelters seen in dense or sheltered scrub for the shelter of a few people were summer camps, and that villages observed along the banks of the Clarence River were winter camps (Collins 2009).

There is every reason to believe a similar pattern of occupation was present along the lower Macleay River in pre-European times and evidence of intensive occupation exists along Clybucca Creek to the north of Frederickton where extensive shell middens, some with evidence of being more than just shell dumps (Knuckey 1999). The faunal assemblage found in the Clybucca 3 midden for example, included Sydney Cockle (*Anadara trapezia*), Rock Oyster (*Crassostrea commercialis*) and Sydney Mud Whelk (*Pyrazus ebininus*), along with fish remains of Black Bream (*Mylio australis*, or *Acanthropagus australis*) and Dusky Flathead (*Platycephalus fusca*). Terrestrial fauna included Swamp Wallaby (*Wallabia bicolor*), Red-necked Pademelon (*Thylogale thetis*).

Food resources were caught in a variety of ways including line, nets, spears and traps for fish, spears and boomerangs for kangaroos, wallabies and other land animals (Campbell 1978). In the Ballina district Ainsworth reported that nets were used during hunting expeditions both for fishing in narrow and shallow waters and in the forests where they (nets) would be strung up between trees in areas where terrestrial game was common and could be driven, by people and dogs, from some distance into the enveloping nets. Flying foxes were also commonly hunted being easily brought down from their colonies during the day using boomerangs and digging sticks (Ainsworth 1987: 43).

5.2 Non-Aboriginal Land Use

The pattern of non-Aboriginal settlement and land use is similar across the entire length of the north coast of New South Wales with the timber-getters (chasing red cedar) making forays into new areas "...beyond the bounds of location..." (Neil 1972: 26) in the 1830s (Campbell 1978), followed by squatters and then, with the passing of the Roberston Land Acts in the 1860s it became easier for settlers to follow the pastoralists and take up land of their own for farming. Frederickton was established as a township in 1857 (Neil 1972) and initially wheat had been the preffered agricultural crop, however, it soon became clear wheat was not suited to the environment and from the 1860s maize became the staple. In the late 1860s farmers began diversifying into sugar cane and then dairying in the 1890s (Neil 1972), which saw the proliferation of cleared Kikuyu (*Pennisetum clandestinum*) pastures that are still present today.

As with other districts further north the growing of sugar cane included the development of locally based sugar mills to process the raw product. The Macleay River Sugar Company was a large mill set up in Frederickton during these times, however, due to a number of factors including "…inadequate supply…" and "…a lack of care during cultivation…" (Neil 1972: 72-73) sugar production slumped and by the 1880s many farmers had returned to growing maize (Neil 1972). By the turn of the 20th century CSR was the dominant force in the sugar industry of the north coast and in 1970 the company celebrated its centenary of sugar milling in Australia (Mackenzie 2006). In 1978 CSR was gone and its mills owned and run by a co-operative of local cane farmers known as the NSW Sugar Milling Co-operative Limited.

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In a similar fashion to the growth of the sugar industry, dairying began as a small 'cottage' operation and developed into an organised industry, and as Mackenzie described for the Maclean district further north, despite the challenges that came with flooding, drought, pests and disease (Mackenzie 2006) milk and butter production flourished for a time in the Frederickton area. The Debenham Butter Factory was established in Frederickton om the mid-1890s and was taken over by the Macleay River Co-operative Dairying company in 1905 which used it to make butter and cheese (Neil 1972). Subsequent to federal government deregulation in 2000 that allowed interstate operators access to the New South Wales market, and the aggressive marketing strategies of the major retailers such as Woolworths and Coles, the more localized dairy industries along the north coast, including the Macleay River valley and Clarence River valley operations fell into decline (Mackenzie 2006).

Despite the down turn in the timber industry resulting from ever scarcer reserves of red cedar, the industry was able to adapt and turn to native hardwoods and at the turn of the century a sustainable timber industry was flourishing in the lower Macleay River valley, resourced by state-owned forest reserves and by privately owned forest lands. Jamieson's Mill operated in Frederickton from 1911-1982 (Navin and Officer 2007).

6 THE ARCHAEOLOGICAL LANDSCAPE

6.1 Archaeological Research

In the lower Macleay River valley it has been the Clybucca district that has been given most archaeological investigation. The Clybucca middens came to the attention of the wider archaeological community in the early 1970's when Valerie Campbell published a paper describing shell samples she had taken in 1969 from middens along the north coast of New South Wales, and the dates obtained from those samples (Campbell 1972). Campbell took samples from a midden she called Clybucca 1 and got dates between 3,850 years (±140) and 1900 (±140) years before the present day. In 1972 Graham Connah, then of the Archaeology Department at the University of New England at Armidale, returned to Clybucca 1 and continued his investigation of the middens along Clybucca Creek further to the west at what he called 'Clybucca 3' (Connah 1975; 1976). Campbell (1972) and Connah's (1975; 1976) research only looked at two middens in the Clybucca midden complex: Clybucca 1 and Clybucca 3. Clybucca 1 was located in the general area focussed upon by the current site visit and Clybucca 3 was located further upstream along Clybucca Creek on what had been identified as the coastline 10,000 years ago (Hails 1968). Clybucca 3 is approximately 25 kilometres north of Kempsey and approximately 14 kilometres inland from the current coast.

In 1999 the author published a paper (Knuckey 1999) on the archaeological material excavated from Clybucca 3 by Connah (1975; 1976). The paper discussed research carried out on the material over the years from when Connah carried out his excavations, including the fact that Connah had dated shell and charcoal from the midden and received dates ranging from 5,120 (±120) years at a depth of 100cm, to 3,360 (±120) years at a depth of 30 centimetres. This meant that the midden at Clybucca 3 was first inhabited at least 5,000 years ago and was abandoned some time after 3,360 years ago. The analysis carried out by this author (Knuckey 1999) showed that Clybucca 3 was not heavily used 5,000 years ago and that people back then were using mainly marine (sea) resources - a good indication that the sea was not far away from the midden. Using the archaeological material excavated the author was also able to show that at around 3,360 years ago many more people were using the midden and they had begun using resources from a more aquatic (freshwater) environment and terrestrial (land) mammals such as kangaroos and wallabies were being used more as well. This is a good indication that by 3,000 years ago the sea was beginning to move further away and a freshwater environment was beginning to dominate the local ecosystems.

The Clybucca 3 midden also contained a burial, a feature that is not uncommon in middens along the east coast of Australia, and this could be the reason the midden was abandoned permanently at approximately 2,380 years ago. Only a portion of the burial was removed from the midden including bones from the appendicular skeleton (the limb bones) of two adults (Knuckey 1999). No further study of the bones was carried out and as a result of the research in 1999 the skeletal material was returned to the Aboriginal Community in Kempsey that year.



6.2 Archaeological Consultancy

In 1997 Mills (1997) completed a vehicular and pedestrian survey of a proposed electricity corridor between Coffs Harbour and Kempsey. The survey was a preliminary investigation based upon a model developed in 1995 by an earlier desktop survey model formulated by Craib and Bonhomme (Cited by Mills 1997: 5). Mills' survey identified four archaeological sites and thirty eight areas of potential archaeological sensitivity and seven of these areas were identified by the local Aboriginal land council as highly significant to the local Aboriginal Community. An Aboriginal member of her field team, representing the LALC for the project was not aware of any sites within the proposed electricity corridor in the Frederickton area other than those already recorded on the National Parks and Wildlife site register (NPWS Minark – the precursor of the current AHIMS database). The author states six areas of archaeological sensitivity were found along the corridor west of Frederickton, two are marked on her map, one 600m due west of the current study area on Great North Road, the other 400m to the northeast of the northeast of the current study area (Map 9, Mills 1997: 55) Also on Map 9 Mills identifies NPWS Site 30-3-0108, within the northern area of potential sensitivity. The site did not appear in the AHIMS site search completed for this current project (See Section 7 – Database and Register Searches).

An environmental impact statement produced by International Environmental Consultants the following year (1998) reviewed Mills' results in the wider context of environmental impacts across the entire transmission corridor.

In 2007 the consultant company Navin and Officer completed an archaeological heritage assessment of the Kempsey to Eungai section of the Pacific Highway upgrade (Navin and Officer 2007). These workers found four Aboriginal sites and twelve potential archaeological deposits (PADs) within the construction footprint, the sites consisting of surface artefact scatters some with the potential to have subsurface features as well. A scarred tree and AHIMS Site No. 30-3-111 were located and found to be approximately 80m away from the construction zone. A number of sites of non-Aboriginal (historical) importance were also located and recorded by Navin and Officer among them the Frederickton Ferry Ramp, the Macleay river Hotel, the Frederickton Butter Factory and the Jamieson Timber Mill. None of the Aboriginal or non-Aboriginal sites identified by the investigators are located within or in proximity to the current study area on Great North and Yarrabandini Roads.

7 DATABASE AND REGISTER SEARCHES

7.1 The Aboriginal Heritage Information Management System (AHIMS)

A search of the OEH Aboriginal Heritage Management System (AHIMS) database indicates that 2 sites have been registered within a 2km radius of the Frederickton study area; none have been recorded within the study area. The AHIMS register is not, however, an accurate record of what exists in the landscape; rather it is a record of the sites that have been found in areas where development has been proposed and/or has gone ahead. As such areas that have not been earmarked for any form of development attention and that may contain Aboriginal objects and/or sites, will not be recognised in the AHIMS database and are therefore 'invisible' until ground surveys are carried out. Nevertheless, and keeping this caveat in mind, the register still provides an overview of site types that might be expected throughout an area. The sites listed in the AHIMS search carried out for this assessment are found in Table 4 and mapped in Figure 6. The AHIMS search results appear in Appendix B.

	AHIMS Site Number	AHIMS Site Site Name (dinates iD84)		rdinates DA94)	Feature Description	
			Easting	Northing	Easting	Northing		
1	30-3-0340	F-IF-1	487220	6566890	487324	6567080	Artefact	
2	30-3-0419	KE PAD 5	-	-	488747	6567097	Artefact and potential archaeological deposit (PAD)	



7.2 Local Government Environmental Plans

No sites of Aboriginal heritage significance are listed in Schedule 5 of the Kempsey Shire Council Local Environmental Plan (KLEP 2013). Four sites of non-Aboriginal (local) heritage significance appear in the Schedule and are mapped in the KLEP 2013 heritage map series, in close proximity to but not within, the study area. These are listed in Table 5 and KLEP 2013 Heritage Map Sheet HER_011c shows their location. See also Figure 7. The KLEP search results are presented in Appendix C.

Suburb	Item Name	Address	Property Description	Significance	Heritage Map Item Number
Frederickton	War memorial	1 Great North Road	Lot 1 DP 122909	Local	124
Frederickton	Frederickton Public School group	11-13 Great North Road	Lot 1 DP 122909, Lot 1 DP 724753	Local	125
Frederickton	Frederickton Cemetery	15-33 Great North Road and Yarrabandini Road	Lot 34 DP1033470 Lots 7300-7301 DP 1136669	Local	126





Figure 6 – Location of the sites registered on the AHIMS database. Study area shaded. Image source: Google Earth Pro (2017).





Figure 7 – Location of places of non-Aboriginal (historical) significance listed in Schedule 5 of the KLEP 2013.

7.3 Other Database Searches

The online Australian Heritage Database (http://www.environment.gov.au/heritage/publications/australianheritage-database) contains information on more than 20,000 natural, Indigenous and historical places. The AHD includes all information from the Register of the National Estate, the National Heritage List, and the Commonwealth Heritage List, as well as information from the World Heritage List, and the List of Overseas Places of Historic Significance to Australia. A search of the AHD listed the following places (Table 6) of heritage value in the Frederickton district.

Table 6 - Sites and places registered on the Australian Heritage Database.

Database	Non-Aboriginal	Aboriginal	Location
	Frederickton Public School		Great Northern Road
Register of the National Estate	Headmaster's Residence		Great Northern Road
	Shelter Shed		Great Northern Road

A search of the New South Wales Heritage Register was also carried out and no sites/places of Aboriginal or historical heritage significance have been registered on the NSWHR database.



8 VISUAL INSPECTION

8.1 Potential Constraints

Areas and landscapes of interest during archaeological survey/inspection are subject to natural (weather or animal/insect activity) and non-natural (for example, human agency) modification. The latter (human agency) can be sub-divided into Aboriginal (which includes both traditional and contemporary activity) and non-Aboriginal activity. Both these subdivisions are of interest, the former for its cultural heritage value and the later for its impact upon the former. Non-Aboriginal human agency includes farming, mining, infrastructure construction, and urban development. These activities contribute directly to, or have a direct influence upon the two main natural constraints affecting archaeological field survey/inspection; ground surface visibility (GSV) and ground integrity (GI). The subject land to the north of the Great North Road and west of Yarrabandini Road at Frederickton (See Fig. 2) is an example of rural, semi-rural, and recreational development that has resulted in a modified and disturbed landscape.

8.1.1 Ground Surface Visibility (GSV)

Estimations of ground surface visibility (GSV) are essential in allowing some determination of how much of the ground surface can be seen (and thus inspected for archaeological and/or cultural remains). The most common constraints to GSV include vegetation cover, both growing (grasses after rain) and dead (humus cover in a forest environment), however concrete, road-fill gravel and bitumen are also inhibitors to GSV. The definition of GSV used here has been adapted from (Hnatiuk *et al.* 2009: 87) and is scaled as a percentage of total coverage, (Table 7). Ground surface visibility was categorised on average as poor (0-25%) across the study area.

Description (coverage)	%	Designation
Any number of plants covering ¾ of the area (75-100%)	0-25	Poor
Any number of plants covering ½ to ¾ of the area (50-75%)	26-50	Fair
Any number of plants covering 1/4 to 1/2 of the area (25-50%)	51-75	Moderate
Any number of plants covering 1/4 of the area (25%)	76-95	Good
Few individual plants with little cover, to completely bare ground (0-5%)	96-100	Excellent

Table 7 - Ground surface visibility. Based on Table 19 of Hnatiuk, Thackway and Walker (2009: 87).

8.1.2 Ground Integrity (GI)

Assessing ground integrity (GI) provides an opportunity to determine whether or not the subject land has been modified by natural, non-natural and/or human (non-Aboriginal) means, and to what degree. Natural vectors can be subtle, wind and rain across many years, or they can be abrupt, flood and fire. Human vectors can also be subtle, in particular through the activity of domestic livestock. Livestock can; however, be a more serious impact upon GI when high stocking rates and low rainfall combine to degrade the landscape more rapidly. More blatant human vectors include urban development, mining, exploration and infrastructure construction.

Archaeologically, determinations of GI are necessary to establish the degree of archaeological integrity - is the archaeological material observed in the same location as where it was originally left? Or have events through time changed that location? If evidence supporting the latter is strong then integrity is reduced and any lessening of archaeological integrity lessens the power of all subsequent investigation, observation and interpretation.

Removal of archaeological significance (or integrity) does not, however, equate with removal and/or destruction of the archaeological record itself. Further, removal of integrity does not remove Aboriginal cultural significance, and for Aboriginal people if archaeological material is present (regardless of its integrity) it can be as important.



Ground integrity is determined here using a percentage scale, 0% meaning context (integrity) is gone - 100% is equal to excellent preservation of the landscape (Table 8). Ground surface integrity was categorised on average as low (26-50%) across the study area.

Table 8 - Ground integrity, based on non-natural, non-Aboriginal vectors of impact. Hnatiuk, Thackway and Walker (2009: 87)

Description	Percent	Designation
Landscape totally disturbed showing 100% modification, with no remnant vegetation present	0-25	Poor
Landscape heavily disturbed 75-100% modification, may contain (minimal) remnant vegetation	26-50	Low
Landscape disturbed, 50-75% modification present, may contain 25-50% remnant vegetation	51-75	Moderate
Landscape displaying low disturbance; includes to 25% modification. Remnant common	76-95	Good
Landscape dominated by remnant canopy and ground cover (≤5% modification)	96-100	Excellent

8.2 Outcomes

Areas of erosion and weathering present the best opportunity for ground surface visibility (GSV) but reduce the integrity (GI) of the landscape. Therefore it is in areas where ground disturbance is highest, along vehicular tracks, animal pads and along creeks and other (including man-made) drainages that GSV is highest. However, when an artefact/artefacts is/are found in these areas the integrity of where the artefact(s) has/have been found will be compromised. It is up to the archaeologist to determine to what degree GI at that location has been affected.

8.2.1 On-Site Ground Surface Visibility and Integrity

As stated above GSV across the study area peaked at 25%, (poor), with the poor visibility most often attributed to vegetation and humus cover. Also, GI was an improvement upon GSV peaking at 50% along some areas that had not been highly modified; the low-lying areas to the north of the playing fields for example. However, in these areas vegetation, remnant native, native regrowth and introduced weed species, has rendered the GSV in those areas as poor to non-existent.

8.2.2 Archaeological (Tangible) Evidence

No surface artefacts were identified during the visual inspection and areas of potential archaeological sensitivity located proved upon inspection to be highly modified to the point where archaeological potential has been removed. The playing fields on Lot 1 DP 126565 and the lot cleared in the recent past (and many times prior to that, *pers. comm.* Don Walsh) with a bulldozer (Fig. 8) on Lot 4 DP 657556 are examples. Discussions with the representatives from the Aboriginal groups present underlined the lack of archaeological and cultural resources within the study area. However, this lack of cultural heritage has more to do with the modification present on-site, than it is an indicator of low potential for evidence of Aboriginal occupation/activity.

No items or places of Indigenous heritage interest were located during the visual inspection of the study area; a disused set of stock yards and loading ramp were located on Lot 2 DP 231681 (Fig. 9), with a remnant building relating to an dairy to the immediate north of the yards (on the same lot) that are occupied as a dwelling at present. Discussions with local land owner Don Walsh indicate the yards are approximately twenty-five years old and the diary has been disused for at least fifty years.





Figure 8 – Lantana and other weeds cleared and stockpiled for removal on Lot 4 DP 657556. Camera is facing northwest, the macadamia plantation is to the left (south).

Figure 9 – The loading ramp and yards on Lot 2 DP 231681, fronting the Great Northern Road in the southwest portion of the study area. The camera is facing east, the ramp is to the left of the vehicle.

8.2.3 Intangible Evidence

No intangible evidence in the way of natural landmarks was identified by the Aboriginal members of the field team. Bob Mumbler, however, made specific reference to the view to the west and the vision toward Kemp's Pinnacle in the far-off tablelands (Fig. 10); an important landmark to Dunghutti People for two reasons; the Pinnacle is the subject of an Aboriginal legend and it is the place where Dunghutti/Thungutti people



and remnants from other neighbouring Aboriginal groups made their last stand against European settlement (Blomfield 1992). Bob Mumbler also made note of and discussed at length with Wayne Sines, the topography along Yarrabandini Road and across the golf course (off-site) to the east, and the fact that, being higher ground than the surrounding landscape (a landscape rich in food and other resources) - a prime location for campsites. It was noted by the author however, that potential for the existence of sites would have been extinguished with the construction of the golf course and Yarrabandini Road. Both Aboriginal men agreed with this prognosis.





Figure 10 – The view to Kemp's Pinnacle (obscured by the electricity towers) from the northwest corner of the Frederickton Golf Course.

9 IMPACT ASSESSMENT

The study area across all lots (See Table 1) shows evidence of disturbance and modification in the form of maintained land clearing (Lot 1 DP 657659 for example), historical land clearing that has been left and regrowth has occurred (Lot 1 DP 126564), land clearing to facilitate cultivation (Lot 4 DP 748840 for example), land cleared and modified for recreational purposes (Lot 1 DP 126565) and land developed for private dwellings (Lot 2 DP 545586 for example). One lot remains relatively undisturbed showing remnant vegetation but also a high degree of native regrowth and exotic species invasion (Lot 223 DP 752437). Remnant vegetation, native regrowth and exotic invasion species occur within the gazetted thoroughfare passing east-west on the northern boundary of the playing field at Lot 1 DP 126565 (See Fig. 4).

Although remnant trees appear in some lots, they are sporadic and more commonly individual trees; it is more common that native vegetation present is regrowth. All plant communities present are dominated by introduced tree, grass and weed species and when assessed in association with the level of disturbance and modification present, the study area conforms with the Office of Environment and Heritage (OEH, previously Dept of Environment Climate Change and Water) definition of disturbed land (DECCW 2010c).

Land is disturbed if it has been the subject of a human activity that has changed the lands surface, being changes that remain clear and observable.

The site inspection revealed no evidence of Aboriginal cultural heritage objects, places, or modified trees and although GSV across the study area was low (restricting the view of the land surface), the level of disturbance and modification present suggests the potential for Aboriginal cultural heritage objects or sites to be present within the study area is low to zero. Therefore the potential for Aboriginal cultural heritage objects or sites to be impacted by the proposed development is also low to zero.

The results of the heritage database and LEP searches together with the visual inspection indicate there are no identified Aboriginal objects or declared Aboriginal places in the current study area. The likelihood of any potential archaeological material to be at risk of harm has been assessed as low to zero and, therefore, an Aboriginal Heritage Impact Permit (AHIP) is not required for proposed development activities at this location, at this stage under the conditions described by OEH as:



If you have followed this code and at any point have reasonably decided that an AHIP application is not necessary either because Aboriginal objects are not present or, if they are present, harm to those objects can be avoided, you can proceed with caution.

If, however, while undertaking your activity you find an Aboriginal object you must stop work and notify DECCW [sic] and you may need to apply for an AHIP.

10 DUE DILIGENCE

1. Will the activity disturb the ground surface?

Yes, the proposed development will involve preliminary vegetation removal through clear and grade development activity, followed by road building, curb and channeling and the installation of subsurface utilities including sewerage, electricity and telecommunications.

2. Are there any confirmed site records, other sources of information or landscape features that heighten the potential for Aboriginal and/or non-Aboriginal objects/places to occur? Search relevant Aboriginal sites databases (for example AHIMS) and any other sources that may provide information on Aboriginal items or places that have the potential to be impacted upon.

Two sites of Aboriginal significance, registered in the AHIMS database, appear within a two kilometre radius of the study area (Fig. 6), along with four sites of local historical significance (Fig. 7). None of those sites/places recorded are located within the study area. A set of stock yards and building from an old dairy were located on Lot 2 DP 231681 along Great Northern Road within the study area but neither have been registered on any heritage database and neither is more than 50 years old.

3. Is the activity in an area where landscape features indicate the potential for Aboriginal items?

Yes. The activity is located in a landscape that includes features OEH has identified as indicating the presence of (or potential presence of) Aboriginal objects; namely within 200m of waters, located on or within 200m of a ridgetop or ridgeline (DECCW 2010c: 12). However, as described here, all lots within the study area have been disturbed and/or modified since the arrival of non-Aboriginal people in the district and some lots have been highly modified in the recent historical past for intensive farming (the macadamia orchard) and recreational purposes.

4. Can harm to an Aboriginal object or landscape feature be avoided?

Yes. If Aboriginal objects are located during the preliminary construction phase estate planning and/or lot design can be altered to avoid the location of any unexpected finds.

5. Does the assessment and field inspection confirm the presence of Aboriginal objects or areas of potential archaeological deposit (PAD)?

No. This impact assessment does not confirm the presence of Aboriginal objects and/or places, including potential archaeological deposits (PAD), and the level of existing disturbance and modification reduces considerably the potential for the existence of cultural heritage objects and/or places. However, there is still potential for unexpected finds to occur during initial landscape clearance activity.

6. Will further investigation and impact assessment be required? Carry out an impact assessment of the proposed activity

Further archaeological investigation will not be required. The proposed residential development zone (study area) as defined in this impact assessment report (See Fig. 2) was inspected on 8 August 2017 and no evidence of Aboriginal objects, scarred trees, and/or places was found. The disturbance and landscape modification that currently exists across the study area suggests the potential for Abriginal cultural heritage items or places to be present is low to zero.



7. Will application for an Aboriginal Heritage Impact Permit (AHIP) be necessary?

Application for an AHIP will not be required. However, protocols should be put in place to allow for the management of unexpected finds and all contract staff involved in initial land clearance activity (including the removal of existing structures) should be shown, by way of a cultural heritage induction program, what cultural heritage items to look for when carrying out initial ground disturbance works.

11 CONCLUSIONS

Kempsey Shire Council's proposed rezoning project on Great Northern Road at Frederickton falls within an area identified as having potential cultural heritage value because the landscape upon which it occurs is identified by the NSW Office of Environment and Heritage (OEH) as one that holds potential for the existence of Aboriginal items and/or places. However, considerable landscape modification since European settlement has altered the land surface and modification of the natural land surface reduces and in some cases removes entirely the potential for Aboriginal items and places to exist. Further, the potential for sub-surface archaeological features to survive is also significantly reduced.

No Aboriginal objects or places were located during the visual inspection of the Great Northern Road – Yarrabandini Road study area (Fig. 2) and although two sites have been registered on the AHIMS database within a radius of 2km (AHIMS Site No. 30-3-0340 and 30-3-0419), neither are on or within the vicinity of the current study area. Given the landscape context and land use history of the area the potential for objects or places to occur is low to non-existent. There would appear to be, therefore, no constraints on Aboriginal and non-Aboriginal cultural heritage grounds to the proposed re-zoning and subsequent housing development. Protocols for the management of unexpected finds are to be put in place, however, and adhered to during initial ground disturbance activities, to provide for the possibility (however remote) cultural heritage items might be uncovered.

12 RECOMMENDATIONS

The proposed re-zoning (and subsequent residential estate development) of a series of lots along the Great Northern and Yarrabandini Roads at Frederickton in the Kempsey local government area of northern New South Wales is considered unlikely to harm Aboriginal items and/or places, or non-Aboriginal items and/or places of heritage significance. It is recommended here that there is no requirement for further archaeological investigation prior to the rezoning and commencement of proposed development works but that the following recommendations are adopted:

- Due to the fact GSV was non-existent across a large proportion of the study area and the fact that disturbance was reduced in some areas of the study area it is recommended the Aboriginal groups involved in the site inspection, the Kempsey Local Aboriginal Land Council and the Dunghutti Elders Council, be involved in monitoring initial ground disturbance activity (including vegetation removal and clear/grade earthworks to a depth of 1m) in the following areas:
 - Lot 001 DP 126564.
 - Lot 001 DP 857721 northern section along the drainage/creek line.
 - Lot 223 DP 752437.
 - Lot 227 DP 752437 eastern section.
 - Lot 228 DP 752437 eastern section.
 - As well as the public access route east-west along the northern margin of Lot 1 DP 126565

All groups need to be given a minimum 14 days notice prior to the commencement of these earthworks.

 It is recommended that Council staff and contractors involved in the initial ground disturbance activities be required to participate in a cultural heritage induction program, developed in collaboration with the local Aboriginal Community.



- In conjunction with induction training developed in collaboration with the local Aboriginal Community, it is recommended Council include a program of cultural awareness to provide an opportunity for explanation of the cultural significance of the Kempsey to Clybucca area, and strengthen the relationships Council is seeking.
- It is recommended that Kempsey Shire Council maintain consultation with the Aboriginal Stakeholders involved, and ongoing. consultation should be for the duration of the initial ground disturbance phase, if not for the entire project.
- It is recommended a Stop Work Procedure (SWP) be installed in recognition of the potential, albeit low, for discovery of unexpected or incidental finds. Note that any works that may reveal or disturb cultural heritage objects or sites will require an AHIP from OEH in order for the find(s) to be mitigated (if avoidance is not an option). The SWP procedure is outlined in the table below, adapted from Fox (2014a; 2014b; 2014c).

Should the work being undertaken include the use of large earth working equipment (large-scale excavators, for example), it may be possible in some instances to isolate the cultural object/place and continue working without further disturbance. Advice from a heritage consultant or Aboriginal field officers/monitors (if present) should be sought, but a nominal buffer of up to 10m may be required, with high-visibility barrier fencing/mesh surrounding the find location.

Council must ensure every on-site contractor/worker is provided with a copy of the SWP process and that all on-site workers are made aware if/when the SWP is brought into action. **IMPORTANT** - Depending upon the nature and importance of the find a full cultural heritage assessment may be necessary as part of an application for an Aboriginal Heritage Impact Permit (AHIP).

STOP WORK	Immediately, upon becoming aware of a potential cultural heritage object or archaeological resource
CONTACT	A qualified cultural heritage professional as soon as possible
NOTIFY	The Kempsey Shire Council's Heritage (or Senior Project) Officer, Dunghutti Elders Council and Kempsey LALC, (if their rep(s) are not already present), and advise OEH as soon as practicable. If bones or potential human remains are discovered, Police must be notified immediately. Police must provide written notification to proceed. If human remains are identified as Aboriginal, OEH will provide written notification of required actions.
ASSESS	 The cultural heritage professional in conjunction with OEH and the Aboriginal stakeholders should assess the significance of the resource and recommend a course of action e.g.: Protect and avoid; or Investigate, in accordance with the Code of Practice for Archaeological Investigations; or Develop management strategies to inform an AHIP to regulate the unavoidable harm to Aboriginal objects
ACTION	Identification of a previously unrecorded cultural heritage object will require registration as an Aboriginal site on the OEH AHIMS database. Registration is required as soon as practicable
APPLY	To OEH for an AHIP if necessary
RECOMMENCE	Only when OEH has approved a course of action and/or provided conditions of approval for an AHIP

In the event that skeletal remains are uncovered, work must cease immediately in the area surrounding the find and the area cordoned off. The NSW Police Department is to be contacted and no further action taken until written advice is received from the Police allowing work to recommence. If the remains are determined to be of Aboriginal origin, the Office of Environment and Heritage must be notified along with the Aboriginal Stakeholders to the project. A plan of management for the preservation of the remains must be put in place prior to works recommencing and it must be developed in consultation with the Kempsey LALC and the Dunghutti Elders Council.



13 REFERENCES

Blomfield, G. 1992. Baal Belbora. Colonial Research Society: Armidale, New South Wales.

- Campbell, I. 1978. "Settlers and Aborigines: the pattern of contact on the New England Tableland 1832-1860". In:
 I. McBryde, editor. *Records of times past: ethnohistorical essays on the culture and ecology of the New England tribes*. Australian Institute of Aboriginal Studies: Canberra, Australian Captial Territory. p 5-16.
- Campbell, V. 1972. "Some radiocarbon dates for Aboriginal shell middens in the Lower Macleay River Valley, New South Wales". *Mankind* 8(4):283-286.
- Coleman, J. 1978. The analysis of vertebrate faunal remains from four shell middens in the Lower Macleay River district [BA Hons]. University of New England: Armidale, New South Wales.
- Coleman, J. 1980. "Fish bones for fun and profit". In: I. Johnson, editor. *Holier than thou: proceedings of the 1978 Kioloa conference on Australian prehistory*. Australian National University: Department of Prehistory, Research School of Pacific Studies. p 61-75.
- Coleman, J. 1982. "A new look at the north coast: fish traps and 'villages'". In: S. Bowdler, editor. *Coastal archaeology in eastern Australia: proceedings of the 1980 Valla Conference on Australian prehistory.* Department of Prehistory, Research School of Pacific Studies. Australian National University: Canberra. p 1-10.
- Collins, J. 2009. *Country Energy proposed second 66kV sub transmission from Koolkhan to Maclean, NSW North Coast. Aboriginal heritage assessment.* Unpublished report to Clarence Consultants Pty Limited. Adise Pty Limited: Dunbogan, New South Wales.
- Connah, G. 1975. "Current research at the Department of Prehistory and Archaeology, University of New England.". *Australian Archaeology* 3:28-31.
- Connah, G. 1976. "Current research at the Department of Prehistory and Archaeology, University of New England, 1975-1976". *Australian Archaeology* 5:1-6.
- DECCW. 2010a. Aboriginal cultural heritage consultation requirements for proponents 2010. Department of Environment, Climate Change and Water: Sydney, New South Wales.
- DECCW. 2010b. Code of practice for archaeological investigation of Aboriginal objects in New South Wales. Department of Environment, Climate Change and Water: Sydney, New South Wales.
- DECCW. 2010c. *Due diligence code of practice for the protection of Aboriginal objects in New South Wales.* Department of Environment, Climate Change and Water, New South Wales: Sydney.
- Fox, I. 2014a. Shared Path West (Section 1 North Angels Beach to Headlands Drive) Cultural Heritage Assessment. Unpublished report prepared for Ballina Shire Council. Ian Fox & Associates: Burringbar, New South Wales.
- Fox, I. 2014b. Shared Path West (Section 2 Skennars Head Road to North Creek Road) Cultural Heritage Assessment. Unpublished report prepared for Ballina Shire Council. Ian Fox & Associates: Burringbar, New South Wales.



- Fox, I. 2014c. Shared Path West (Section 3) North Creek Road (Tara Downs to Amber Drive) Cultural Heritage Assessment. Unpublished report prepared for Ballina Shire Council. Ian Fox & Associates: Burringbar, New South Wales.
- Hails, J. 1968. "The late Quaternary history of part of the mid-north coast, New South Wales, Australia". *Insitute Of British Geography* 44:133-147.
- Henderson, J. 1851. Excursions and Adventures in New South Wales with Pictures of Squatting and Life in the Bush. Volumes 1-2. W. Stoberl: London.
- Hiscock, P. 1988. Archaeological Investigations in the Boulia District, Southwestern Queensland. Unpublished report tot eh Australian Heritage Commission. Queensland Museum: Brisbane.
- Hnatiuk, R., R. Thackway, and J. Walker. 2009. "Vegetation". In: NCST, editor. *Australian Soil and Land Survey Field Handbook*. National Committee on Soil and Terrain, CSIRO Publishing: Collingwood, Victoria. p 73-125.
- IEC. 1998. Coffs Harbour-Nambucca-Kempsey 132kV transmission line: environmental impact statement. Unpublished report by International Environmental Consultants to Transgrid. International Environmental Consultants Sydney, New South Wales.
- Knuckey, G. 1999. "A shell midden at Clybucca, near Kempsey, New South Wales". *Australian Archaeology* 48:1-11.
- Lilley, I. 1984. "Late Holocene subsistence and settelment in subcoastal southeast Queensland". *Queensland* Archaeological Research 1:8-32.
- Mackenzie, D. 2006. A thematic history of Maclean Shire, Volume 2. Community-based heritage study: Maclean, New South Wales.
- McBryde, I. 1974. Aboriginal prehistory in New England: an archaeological survey of northeastern New South Wales. Sydney University Press: Sydney.
- McBryde, I. 1982. Coast and Estuary. Australian Institute of Aboriginal Studies: Canberra.
- Mills, R. 1997. An archaeological survey for the proposed Coffs Harbour to Kempsey 132 kV transmission line. Unpublished report to International Environmental Consultants for Transgrid. Robynne Mills Archaeological and Heritage Services: Newtown, New South Wales.
- Navin, K., and K. Officer. 2007. *Kempsey to Eungai: upgrading the Pacfiic Highway heritage assessment.* Unpublished report to Parsons Brinckerhoff for the NSW Roads and Traffic Authority. Navin Officer Heritage Consultants: Kingston, Australian Captial Territory.
- Neil, M. 1972. Valley of the Macleay. Wentworth Books: Sydney, New South Wales. 104 p.
- NPWS. 2007. *Clybucca Historic Site Plan of Management*. NSW National Parks and Wildlife Service, Department of Environment and Conservation: Port Macquarie.
- OEH. 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*. New South Wales Premier's Department, Office of Environment and Heritage: Sydney, New South Wales.
- Pierce, R. 1971. The Effects of Aquatic Foods on the Diet and Economy of the Aborigines on the North Coast of New South Wales at the Time of First Settlement. University of New England: Armidale, New South Wales.



Rassam, D., M. Raiber, D. McJannet, S. Janardhanan, J. Murray, M. Gilfedder, T. Cui, V. Matveev, T. Doody, M.
 Hodgen, and M. Ahmad. 2014. *Context statement for the Clarence-Moreton bioregion. Product 1.1 from the Clarence-Moreton Bioregional Assessment*. Dept. of the Environment, the Bureau of Meteorology, the CSIRO and Geoscience Australia: Canberra, Australia.



APPENDIX A ABORIGINAL STAKEHOLDER NOTIFICATION LETTER



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ABN - 99 092 565 110

Monday 29 May 2017

Name Number and Street Suburb/Town, STATE. Postcode

CULTURAL HERITAGE IMPACT ASSESSMENT OF A PROPOSED REZONING (TO RESIDENTIAL) PROJECT, FREDERICKTON, KEMPSEY SHIRE COUNCIL, NEW SOUTH WALES

Kempsey Shire Council (Council or KSC) is in the process of preparing a residential development proposal covering a portion of land on the Great Northern Road at Frederickton, north of Kempsey (Fig. 1). The proposed development area covers approximately 30 hectares with the Great North Road as its southern boundary, then falling away to the northwest. In general the targeted land is moderately undulating hill country, predominantly cleared of trees and is dissected by two intermittent creeks, both of which drain into Collombatti Creek. The proposed development area needs to be re-zoned from its current status as Primary Production (RU1), Rural Landscape (RU2) and Village (RU5). Table 1 lists the portions of land that fall within the proposed development area.

Council has asked Remnant Archaeology to carry out a cultural heritage impact assessment (CHIA) across the proposed development zone (study area) and as a priority I'm writing to you to ask your advice on whether any members of your organisation know of tangible Aboriginal objects and/or sites within the area set for rezoning that may potentially be impacted by the proposed development, or, if any members of your organisation know of any intangible sites and/or places of significance linked to traditional stories that may exist and potentially be impacted by the proposed development. There will be a site inspection, however, dates have not as yet been finalised. Depending upon the outcomes of the CHIA the assessment process may have to move into a full cultural heritage assessment (CHA).

I look forward to your comments/advice regarding this proposal.

Yours Sincerely,

Graham KNUCKEY PhD

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Figure 1 - Kempsey Council's Figure 2, the location of the study area on the Great North Road.

Lot	Deposited Plan	Comments	Lot	Deposited Plan	Comment
1	126564	Entire lot	1	748840	Entire lot
1	126565	Entire lot	2	748840	Entire lot
1	231681	Entire lot	3	748840	Entire lot
2	231681	Entire lot	4	748840	Entire lot
4	418001	Entire lot	223	752437	Entire lot
2	545586	Entire lot	227	752437	Portion of lot
3	545586	Entire lot	228	752437	Portion of lot
4	657556	Entire lot	1	857721	Entire lot
1	657659	Entire lot			

Table 1 - Lots either entirely within or partially within the study area.

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					- L				- L	
SiteID	SiteName	8	Zone Ea		멹	Context	Site Status	SiteFeatures	SiteTypes	Reports
30-3-0340	F-IF-1	AGD	56 487220	220 6566890		Open site	Valid	Artefact : 1		
	Contact T Russell	Recorders	Jim Kelton					<u>Permits</u>		
30-3-0419	KE PADS	GDA	56 488747	747 6567097	0 2007	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	<u>Recorders</u>	Kerry Nav	rin,Navin Office	ter Heritage	Kerry Navin, Navin Officer Heritage Consultants Pty Ltd	y Ltd	Permits	3406	

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APPENDIX C KEMPSEY LOCAL ENVIRONMENT PLAN SEARCH RESULTS

R 🚟 🤞	New South W	/ales Government									kip to	
	NSW legi	slation					www.l	egislati # Home 0				
Search	Browse	Notification-Gazette	As	Made	Bill	s LegInfo	Links			ß	₽	-
5.10 He	eritage conserva	tion					Herborn Lane					
5.12 Inf		elopment and use of existing		Euroka		Euroka Cemetery	Euroka Road	Lot 11, DP 816589	Local	1	23	
5.13 Ec	ildings of the Cr o-tourist facilitie	S		Euroka		Euroka Uniting Church	235 Euroka Road	Lot 10, DP 816589	Local	1	121	
	aing Spring Obs afence communi	ervatory—maintaining dark sky cations facility		Euroka		Former school residence	249 Euroka Road	Lot 11, DP 603927	Local	1	22	
Part 6	Urban relea	ase areas		Frederick	cton	War Memorial	1 Great North	Lot 1, DP	Local	1	24	
	rangements for rastructure	designated State public					Road	122909				
6.2 Pu 6.3 De	blic utility infras			Frederic		Frederickton Public School group— comprising	11–13 Great North Road	Lot 1, DP 122909; Lot 1 DP 724753	Local	1	125	
Part 7	Additional	local provisions				school building, including						
	id sulfate soils Irthworks					weather vane and bell tower, headmaster's						
7.3 Flo	ood planning					residence and						
7.4 Ko	ala habitat					shelter shed						
7.6 Pr		and in karst areas ic character and landscape		Frederic	cton	Cemetery	15–33 Great North Road and Yarrabandinni	Lot 34, DP 1033470; Lots 7300 and 7301		1	26	
	rspace operation	ns					Road	DP 1136669	l,			
7.8 De		reas subject to aircraft noise		Frederic		Frederickton Hotel (formerly	10 Macleay	Lot 1, DP 749455	Local	1	127	
		rvices premises				The Macleay Hotel)	Succi	/49455				
Scheo uses	lule 1 Additi	onal permitted		Frederic	cton	Former post office	14 Macleay Street	Lot 4, DP 681	79 Local	1	28	
Scheo	lule 2 Exem	pt development		Frederic	cton	Frederickton School of Arts	20 Macleay Street	Lot 1, DP 681	79 Local	1	29	
Schedule 3 Complying development			Fredericktor		Butter factory	1–5 Pacific Highway	Lots 1–3, DP 586074; Lots 1	Local	1	30		
		ification and f public land					J	and 2, DP 1071111				
		onmental heritage		Gladston	e	Residence	25 Barnard Street	Lot 3, DP 600	3 Local	1	31	
Dictio	nary			Gladston		Patterson's Butchery	39 Barnard Street	Lot 11, DP 60	03 Local	1	132	
Histor	ical notes			Gladston	e	Uniting Church	Darkwater Street	Lot 21, DP 810270	Local	1	134	~